

CLAIMS

1. Bulk catalysts based on chromium and on nickel which are obtained by impregnation of an amorphous chromium III oxide with a solution of a nickel derivative, characterized in that the chromium oxide used exhibits a BET specific surface of greater than  $150 \text{ m}^2/\text{g}$  and a pore volume of greater than  $0.15 \text{ ml/g}$ .
2. Catalysts according to Claim 1, which are obtained from a chromium oxide having a BET specific surface of greater than  $180 \text{ m}^2/\text{g}$ .
3. Catalysts according to Claim 1 or 2, which are obtained from a chromium oxide exhibiting a pore volume of greater than  $0.18 \text{ ml/g}$ .
4. Catalysts according to one of Claims 1 to 3, in which the chromium oxide used originates from the calcination of a chromium III hydroxide precipitate or from the reduction of chromium VI oxide.
5. Catalysts according to one of Claims 1 to 4, in which the nickel derivative is a nickel II oxide, hydroxide, halide, oxyhalide, nitrate or sulphate, preferably nickel chloride.
6. Catalysts according to one of Claims 1 to 5, in which the Ni/Cr atomic ratio is between 0.01 and 1, preferably between 0.02 and 0.6 and more particularly between 0.02 and 0.4.

7. Catalysts according to one of Claims 1 to 6, which are obtained by means of an aqueous or alcoholic solution of a nickel derivative.

8. Process for the catalytic fluorination of saturated or olefinic halogenated hydrocarbons by HF in the gas phase, characterized in that a catalyst according to one of Claims 1 to 7 is used.

9. Process according to Claim 8, in which, before it is used, the catalyst is dried under an inert gas or under air at a temperature of between 100 and 350°C and then activated with HF.

10. Process according to Claim 9, in which the HF is first introduced diluted in air or, preferably, in an inert gas at a temperature ranging from 150 to 200°C and then pure at a temperature of less than 400°C, preferably of between 350 and 380°C.

11. Process according to one of Claims 8 to 10, in which the fluorination temperature is between 50 and 500°C, preferably between 100 and 450°C and more particularly between 120 and 400°C.

12. Process according to one of Claims 8 to 11, in which the contact time is between 3 and 100 seconds, preferably less than 30 seconds.

13. Process according to one of Claims 8 to 12, in which the molar ratio: HF/halogenated hydrocarbon(s) is between 1/1 and 30/1, preferably less than 20/1.

14. Process according to one of Claims 8 to 13, in which the fluorination is carried out at an absolute pressure of between 0.08 and 2 MPa, preferably between 0.1 and 1.5 MPa.

5            15. Process according to one of Claims 8 to 14, in which the fluorination is carried out in the present of an oxidizing agent, preferably oxygen or air.

10           16. Process according to one of Claims 8 to 15, in which the catalyst, deactivated by coking, is regenerated by treatment with air or with oxygen or by a  $\text{Cl}_2/\text{HF}$  mixture, at a temperature of between 250 and 400°C.

15           17. Process according to one of Claims 8 to 16, in which the halogenated hydrocarbon is perchloroethylene or 1-chloro-2,2,2-trifluoroethane.